

REMARKS

In response to the Office Action mailed on April 4, 2008, Applicants respectfully request reconsideration. Claim(s) 1-56 are now pending in this Application. Claim(s) 1 and 40 are independent claims and the remaining claims are dependent claims. In this Amendment, claim 2 has been amended to correct a typographical error. Claims 25-39 and 51-56 are withdrawn from consideration. Claims 2 - 7, 12, 15 - 24 and 42 - 50 have been indicated to include allowable subject matter.

Applicants have added new claims 57-59. No new matter has been added. Support for claims 57-59 can be found on page 23 lines 7-8 in Applicants' specification as well as elsewhere throughout the specification and corresponding figures. Applicant(s) believe that the claim(s) as presented are in condition for allowance. A notice to this affect is respectfully requested.

In response to the Request for Information under 37 CFR 1.105, Applicant and the assignee of this application have provided an Information Disclosure Statement citing copies of information, including non-patent literature and US patents. Applicants' representative extended a call to the Examiner to discuss the requirement of providing the original disclosure. The Examiner indicated that there was no need to submit it for review. However, upon request, the Applicants will forward it to the Examiner.

Claim Rejections - 35 USC § 112

Claims 1 - 24 and 40 - 50 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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The Office Action states "that claims 1 - 24 and 40 - 50 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. The office action states: "Regarding claims 1 and 40, the scope of the term "multi-dimensional" or "multi-directional" stimulus is indefinite and therefore unclear. "

Applicants respectfully submit that Applicants' specification provides exemplary embodiments and the scope of the terms "multi-dimensional" user indicators or "multi-directional" stimulus as follows: "The sample probe 150 configured in accordance with embodiments of the invention further includes a multi-dimensional user indicator 158 that is in communication with the controller 120 via a data communications channel 163 to receive and operate in response to an indicator signal 121 to indicate, for example, the relative concentration of the compound detected within the vapor sample for presentation via a multi-directional stimulus such as light or sound or vibration to a user of the vapor analysis system. **By multi-dimensional**, it is meant that in embodiments of this invention, the user indicator 158 is **non-planar** (as opposed to a flat panel display in conventional systems) and its signal can be readily sensed regardless of orientation of the probe. For example, the user indicator 158 may be disposed around a circumference of a central axis of the housing 151 defined by the vapor channel 157. The user indicator 158 thus produces **a multi-directional signal from opposite sides of the sample probe** 150 that may be perceived, (seen **heard**, felt) or **audible** by a user of the sample probe 150 from essentially any

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position around the circumference of the probe 150. In other configurations, the controller 120 sends a concentration signal 121 to a processor in the keypad 170 which operates processing to control the modulation signal sent through the interface cable 163 to control the user indicator 158.” (Specification Page 23 lines 1-17). Thus, the multi-dimensional user indicator provides the multi-directional stimulus. Accordingly, the user can sense the relative concentration more easily.

As to the questions posed by the Office Action:

“For example, does the stimulus include both a digital display readout of the concentration level of the detected vapor and an audible alarm that sounds continually over time as long as the vapor is being detected or once upon initial detection?”

The specification discloses that, according to one embodiment, the system can have a separate display 172 for display numeric values: “During operation of the control program 122, the control program 122 is able to output information over the data entry communications channel 175 for display on the display 172 of the keypad 170 for presentation to a user of the vapor analysis system 100.” (Specification Page 27 lines 23 –25)

“Does the stimulus include an audible indication, such as a computer-generated voice readout, of the concentration level of the vapor detected?”

The specification recites an embodiment as follows: “The audible user indicator can produce sound such as a beeping or tone pattern or other tone based upon

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the indicator signal 121 that it receives from the control program 122 over the data communications channel 163. **The pitch, tone or beeping frequency of such an audible user indicator can convey to a user the operative state of the control program 122 and the relative concentration level 132 of a compound existing within the vapor sample 103.** It is to be understood that a sample probe 150 configured according to embodiments of the invention can include one, or more than one, type of user indicator such as a light pipe 158 in addition to a speaker or vibration mechanism mounted elsewhere within the housing 151 of the sample probe 150. If the user indicator 158 is a vibration mechanism, the controller 120 can modulate the signal 121 to control the amount of vibration felt by the user.” (Specification Page 25, lines 5–15, emphasis added)

The Office Action further states: “The scope of the term “relative” concentration is unclear.” Applicants respectfully submit that the term “relative” concentration is used similarly to the term relative humidity (i.e., with respect to water vapor concentration). “Relative” in the claim thus indicates that the relative concentration is based on a ratio calculation as known by one of ordinary skill in the art.

Is an audible alarm generated for a range of vapor concentration levels?

In accordance with at least one embodiment, the specification describes that: “[t]he user indicator may flash or beep according to a predetermined threshold indicator signal modulation pattern, so the user can quickly identify leaking equipment in the vicinity of the leak point. There may be a minimum threshold level where the system does not increase the modulation of the indicator signal if a detected vapor concentration is below a specified value.” (Page 12 lines 15-19)

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Does the device display a specific numeric value for the vapor concentration level in addition to an audible signal, such as an alarm?

In accordance with at least one embodiment, the specification describes that the system can have a separate display 172 for display numeric values: "During operation of the control program 122, the control program 122 is able to output information over the data entry communications channel 175 for display on the display 172 of the keypad 170 for presentation to a user of the vapor analysis system 100." (Page 27 lines 23 –25)

Accordingly, the Examiner is respectfully requested to withdraw the indefiniteness rejection.

Claim Rejections - 35 CSC § 102

Claim(s) 1, 8 - 11, 13, 14, 40 and 41 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. Sunshine et al. (U.S. Pat. No. 6,085,576) ("Sunshine") Applicants respectfully disagree with these contentions and assert that the present claimed invention is not anticipated by any disclosure in the cited reference.

Advantageously, the user of one embodiment of the inventive sample probe can, while holding the probe in almost any position, determine (e.g., visually, by simply viewing the multi-dimensional user indicator, or audibly if the user indicator produces sound) that the vapor analyzer has detected the threshold concentration of the compound. The user indicator may flash or beep according to a predetermined threshold indicator signal modulation pattern, so the user can quickly identify, for example, leaking equipment in the vicinity of the

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leak point. Use of the multi-dimensional indicator means that the user of the device need not to be worried so much about its orientation. Thus, a user can focus on moving the device in a manner so that a good sample can be taken.

Applicants respectfully submit that Sunshine neither teaches nor suggests “a multi-dimensional user indicator, the user indicator in communication with the controller to receive and operate in response to the indicator signal to indicate the relative concentration of the compound detected within the vapor sample for presentation via a multi-directional stimulus to a user of the vapor analysis system” as recited in claim 1.

For example, Sunshine (at Col. 20, lines 12-22) discloses a vapor sensing device 100a comprising a display 120, which is described to be:

Display

In some embodiments, the display is a liquid-crystal display (LCD). In other embodiments, the display is a graphical LCD that allows the device to display text and graphics. This type of display provides a quality product interaction experience. Examples of LCD modules ...Various other LCD modules are also suitable.

Applicants respectfully submit that the flat panel display of Sunshine does not anticipate Applicants' multi-dimensional user indicator. See language in the specification indicating that “**By multi-dimensional**, it is meant that in embodiments of this invention, the user indicator 158 is **non-planar** (as opposed to a flat panel display in conventional systems)” (Specification Page 23, lines 7-9). New claim 57 further describes this feature. Applicants respectfully request that the Examiner consider claim 57 as an option for amending up into claim 1 to place the claims in condition for allowance.

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For analogous reasons, Applicants respectfully submits that claim 40 should be allowable for similar reasons. For example, claim 40 recites the following limitation: “signal by presenting to a user of the probe a multi-dimensional stimulus indicative of the relative concentration of the compound,”

For applicable reasons, Applicants respectfully submit that claim 40 is not anticipated by Sunshine.

As to new claims 57 and 59, Applicants respectfully submit that Sunshine neither teaches nor suggests a non-planar indicator disposed around the perimeter of the sample probe.

As to new claim 58, Applicants respectfully submit that Sunshine neither teaches nor suggests providing a predetermined threshold indicator signal modulation pattern when the vapor analyzer detects a threshold concentration of the compound that exceeds a predetermined value such that the user of the sample probe can determine from a multi-directional stimulus.

Claims 2 - 7, 12, 15 - 24 and 42 - 50 have been indicated to include allowable subject matter. As claims 8-11, 13, 14, 41 and 57-59 cite additional structure and depend from allowable claims 1 and 40 respectively, they too should be in condition for allowance.

Applicant(s) hereby petition(s) for any extension of time which is required to maintain the pendency of this case. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50-3735.

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If the enclosed papers or fees are considered incomplete, the Patent Office is respectfully requested to contact the undersigned collect at (508) 616-9660, in Westborough, Massachusetts.

Respectfully submitted,

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